

REMARKS

Applicant would first like to thank the Examiner for the indication that claim 2 is allowed. In the above amendment, claim 2 is left untouched. Claims 1 and 3 were rejected under 35 U.S.C. 102(b) as being anticipated by Aldenhovel. Applicant respectfully submits that for the reasons stated below, the present invention should be patentable over Aldenhovel.

The present invention is drawn to a method, and circuit or device for detecting electric discharges that may occur to an x-ray tube. When any such electric discharges are detected, supply of electricity to the x-ray tube has to be stopped because they could cause damages to the x-ray generator.

When electric discharges occur to an x-ray tube, it is observed that the voltage on the x-ray tube steeply fluctuates. Thus, the electric discharges can be detected by monitoring the voltage on the x-ray tube and identifying the steep fluctuations caused by electric discharges. More specifically, in the present invention, the voltage fluctuations are transformed into arrays of pulses, which are counted. It is then determined that electric discharges occur when the pulse count reaches a predetermined value within a predetermined time period.

In Aldenhovel, a radiation of x-ray is controlled with three parameters: the x-ray tube voltage; the x-ray tube current; and the current-time products. (column 2, lines 46-54). The x-ray tube current is converted by the voltage-frequency converter 21 into a pulse train. The counter 14 counts the pulses to calculate an amount of current supplied to the x-ray tube. When the counter 14 counts the pulses up to a predetermined number, or when supply of current to the x-ray tube reaches a predetermined amount, supply of electricity to the x-ray tube is cut off. (column 4, lines 9-22) It should therefore be noted that in Aldenhovel, the counter 14 counts pulses converted into from the x-ray tube current. On the other hand, in the present invention,

Applicant respectfully requests the Examiner grant early allowance of this application. The Examiner is invited to contact the undersigned attorneys for the Applicant via telephone if such communication would expedite this application.

Respectfully submitted,



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